Table S7: QTL of IBD analysis across TEs. Chromosome (Chr.), position (Pos.), support interval (SI), FDR p-value, proportion of phenotypic variance explained (R^2), and additive effects (Eff) of the founders Event (A), BAYP4535 (B), Ambition (C), Firl3565 (D), Format (E), Potenzial (F) and Bussard (G) relative to Julius are given for the traits powdery mildew (PM), septoria tritici blotch (STB), tan spot (TS), plant height (PH), ear emergence time (EET) and leaf angle distribution (LAD). The detection of a QTL within a TE is specified (TE), additionally.

Trait	Chr.	Pos. (cM)	SI (cM)	P-value	$R^{2\ *}$	Eff(A)	Eff(B)	Eff(C)	Eff(D)	Eff(E)	Eff(F)	Eff(G)	TE
PM [1-9]					33.3								
	1A	3	2-3	7.3E-05	8.7	0.8	-0.7	1.0	1.0	1.2	1.3	1.1	17FS1
	2B	134	132-134	4.4E-03	6.1	0.6	-0.1	-2.5	0.6	2.7	0.1	1.3	17FS1
	6B	226	225-227	5.3E-03	5.9	-1.7	-0.8	-1.4	-0.8	-0.1	-0.5	-1.0	17FS1
	7A	381	359-390	3.6E-07	12.4	-1.0	-0.7	-2.3	-1.1	-0.4	-0.6	-0.9	17FS1
	7D	19	12-22	1.1E-03	7.1	-3.9	-1.9	-5.4	8.5	-0.3	-0.4	-0.8	17FS1
STB [%]					24.9								
	1A	23	23-26	8.3E-03	5.8	-1.6	-7.1	3.5	-5.1	3.0	-2.7	17.6	17FS1
	2B	92	92-92	8.9E-03	5.7	-0.8	6.2	4.2	-11.3	26.9	-4.4	5.1	
	2B	242	229-254	5.4E-03	6.7	27.4	-3.4	-9.1	-3.4	9.3	10.6	8.7	17FS1
	2D	20	20-21	1.1E-03	8.3	-8.8	-6.5	5.3	-6.3	10.8	-8.3	4.8	17FS1
	5B	303	303-303	8.0E-03	5.8	-11.5	-12.4	-17.8	-11.0	-0.4	-14.6	-14.4	
TS [%]					29.9								
	1A	23	0-26	4.5E-03	4.8	6.0	2.9	3.6	5.6	6.3	5.3	15.8	17SL
	1A	56	56-63	6.4E-05	8.3	10.2	5.3	9.9	9.1	9.8	12.3	19.3	17SL
	2A	90	73-115	1.9E-04	7.6	7.4	-1.7	2.8	6.5	2.1	-1.4	-5.5	17SL
	2A	143	142-190	1.4E-03	6.1	11.0	-2.5	1.3	-3.5	-4.7	-0.2	-4.6	17SL
	2A	275	264-288	2.2E-03	5.7	-4.9	-8.3	-6.0	-9.7	1.5	-5.5	-6.2	17SL
	2B	92	81-94	4.5E-03	4.8	-3.4	-0.6	1.4	0.9	10.7	-0.9	-3.8	
	2B	157	145-163	3.9E-03	5.0	3.2	1.1	52.9	-41.0	9.0	12.5	4.8	
	2B	222	181-276	1.6E-05	9.4	23.4	1.5	31.7	-46.3	6.3	11.2	7.2	16FS2, 17FS2
	2D	164	160-167	6.9E-05	8.3	-1.4	-7.0	-0.9	-17.5	-12.8	-2.1	-8.6	17FS2, 17SL
	3A	321	319-324	1.8E-03	5.9	9.9	4.1	5.6	7.9	4.7	3.5	8.5	17SL
	3B	80	17-84	1.7E-03	5.9	1.0	0.4	10.7	1.6	7.5	5.2	2.8	17SL
	3B	322	321-322	5.3E-03	4.6	2.8	5.9	0.7	9.6	4.6	3.4	2.8	17FS2, 17SL
	3D	84	81-122	1.4E-04	7.8	-9.1	-15.6	-4.7	0.3	8.6	-4.8	-5.6	17FS2, 17SL
	4A	167	162-169	3.0E-03	5.4	5.1	3.4	11.5	11.6	4.8	8.6	1.8	17SL
	4B	172	122-215	5.5E-03	4.6	-6.4	-5.0	-7.7	-4.5	-8.6	-5.8	-11.1	17FS2, 17SL

Table S7 (Continuation): QTL of IBD analysis across TEs. Chromosome (Chr.), position (Pos.), support interval (SI), FDR p-value, proportion of phenotypic variance explained (R^2), and additive effects (Eff) of the founders Event (A), BAYP4535 (B), Ambition (C), Firl3565 (D), Format (E), Potenzial (F) and Bussard (G) relative to Julius are given for the traits powdery mildew (PM), septoria tritici blotch (STB), tan spot (TS), plant height (PH), ear emergence time (EET) and leaf angle distribution (LAD). The detection of a QTL within a TE is specified (TE), additionally.

Trait	Chr.	Pos. (cM)	SI (cM)	P-value	$R^{2\,*}$	Eff(A)	Eff(B)	Eff(C)	Eff(D)	Eff(E)	Eff(F)	Eff(G)	TE
TS [%]													
	5A	185	170-216	1.1E-03	6.3	-7.8	-7.4	-12.2	-8.2	-1.5	-7.5	-9.3	17SL
	5B	30	28-31	4.3E-03	4.9	-0.9	-2.8	-4.0	3.7	-3.2	2.3	4.2	
	6A	252	242-265	2.2E-03	5.7	3.5	-3.9	-3.6	1.7	-3.4	-0.2	6.1	17SL
	6B	243	235-250	2.8E-03	5.4	-2.0	-6.5	-10.9	-4.9	-5.6	-10.6	-6.2	17SL
	6D	51	45-51	5.9E-03	4.5	-13.6	-8.5	-10.3	-6.2	-9.0	-5.2	-1.7	17FS2, 17SL
	7A	148	87-206	4.9E-06	10.3	-1.5	-8.3	-2.6	4.3	1.9	1.8	2.3	16FS2, 17FS2, 17SL
	7A	242	235-245	2.8E-03	5.5	-5.3	-6.6	2.5	-3.8	-0.5	-1.6	0.3	17SL
	7B	60	56-70	2.3E-03	5.7	-12.8	-4.0	-9.2	-14.9	-10.9	-11.7	-6.7	16FS2, 17SL
PH [cm]					**53.1**								
	4B	72	68-148	9.3E-05	8.3	-4.1	-8.5	0.5	-1.2	3.1	-0.6	5.5	16FS1, 16FS2, 17FS1, 17FS2, 17SL
	4D	27	0-87	1.1E-28	33.6	-8.0	14.2	4.9	18.5	15.0	10.1	10.4	16FS1, 16FS2, 17FS1, 17FS2, 17SL
	6A	158	124-173	4.2E-07	11.4	-0.8	-2.4	-10.4	-1.8	-4.7	-9.0	1.8	16FS1, 16FS2, 17FS1, 17FS2, 17SL
EET [DaM]					**23.9**								
	3A	229	203-230	7.9E-04	8.0	1.4	0.9	1.3	0.1	1.4	-0.1	0.1	16FS1, 17FS1, 17SL
	5A	183	178-185	3.6E-03	6.8	0.5	0.7	0.3	0.7	0.1	1.6	1.5	16FS1, 17FS1
	5B	104	89-105	3.5E-03	6.3	0.8	1.5	-0.1	-0.9	0.5	-0.1	0.0	17SL
	5D	234	234-237	7.3E-03	5.7	1.1	-1.1	0.1	-0.3	0.1	0.1	-0.1	16FS1
	7A	106	106-106	6.8E-03	5.7	-1.0	0.2	-1.1	-1.4	-0.1	-0.4	-0.5	16FS1
LAD [1-9]					**27.4**								
	2B	172	113-213	1.1E-08	13.4	-1.9	0.3	-3.1	1.7	-0.3	-0.6	0.3	16FS1, 16FS2, 17FS1, 17SL
	2D	166	166-167	8.4E-03	5.2	-0.2	0.9	-0.4	0.8	-0.4	1.5	-1.1	
	4B	72	72-75	4.5E-03	5.7	1.0	1.2	-0.2	0.5	0.3	-0.5	-0.4	16FS1
	6A	40	37-46	8.3E-04	6.7	0.0	-0.6	-0.8	-0.6	0.6	0.3	-0.1	16FS1

* For each trait the explained phenotypic variance of the model fitting all detected QTL simultaneously is given in bold values above the individual R^2 values for each QTL.